

Applicant : Stefan Hein
For : LOCK VALVE IN PARTICULAR FOR A
STRIP PROCESSING UNIT
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In the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

1-13. (canceled)

14. (new) An air-lock valve comprising:

a housing having an opening configured to be traversed by a flexible band substrate;
and

at least one moveable sealing body cooperating with a sealing surface of the housing for closing the opening during a closing phase of the air-lock valve, with the band substrate being clamped between the at least one movable sealing body and the sealing surface;

wherein the sealing surface surrounds the opening in a frame-like fashion, and the opening is closed by pressing the body upon the sealing surface and/or upon the band substrate traversing the opening such that the body closes the opening at least through indirect abutting at edges of the sealing surface.

15. (new) The air-lock valve according to claim 14, wherein:

the band substrate may be forced through the body against a sealing edge of the opening at the sealing surface, such that, in the area of the sealing edge, a tangent of the body produces an obtuse angle towards the longitudinal or traversing direction of the band substrate.

16. (new) The air-lock valve according to claim 15, wherein:

the at least one body and the sealing surface each have an arcuate contour and a radius of the sealing surface is larger or equal to the radius of the body.

17. (new) The air-lock valve according to claim 16, wherein:

the sealing surface and/or the body are provided with an elastically flexible surface material.

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18. (new) The air-lock valve according to claim 16, wherein:
the body comprises a cylindrical roll.
19. (new) The air-lock valve according to claim 15, wherein:
the body comprises a cylindrical roll.
20. (new) The air-lock valve according to claim 15, wherein:
the sealing surface and/or the body are provided with an elastically flexible surface material.
21. (new) The air-lock valve according to claim 14, wherein:
the at least one body and the sealing surface each have an arcuate contour and a radius of the sealing surface is larger or equal to the radius of the body.
22. (new) The air-lock valve according to claim 21, wherein:
the body comprises a cylindrical roll.
23. (new) The air-lock valve according to claim 22, wherein:
the sealing surface and/or the body are provided with an elastically flexible surface material.
24. (new) The air-lock valve according to claim 14, wherein:
the sealing surface and/or the body are provided with an elastically flexible surface material.
25. (new) The air-lock valve according to claim 14, wherein:
the sealing surface comprises a planar, flexible material, being tightly connected, with a wall section in frame-like fashion in an area of a circumferential border of the opening.

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26. (new) The air-lock valve according to claim 14, wherein:
the body comprises a cylindrical roll.
27. (new) The air-lock valve according to claim 14, wherein:
the body is rotably mounted.
28. (new) The air-lock valve according to claim 14, wherein:
the body is moved between an inactive and a closed position by a separate power drive.
29. (new) The air-lock valve according to claim 28, wherein:
the separate power drive is provided at or inside the housing.
30. (new) The air-lock valve according to claim 14, wherein:
the body is firmly tightened against the sealing surface with a predetermined bearing
load by an accumulator.
31. (new) A processing plant for traversing band-like substrates comprising:
at least one evacuable processing chamber;
at least another chamber associated with the at least one evacuable processing chamber
for unrolling or winding up the band substrate;
the chambers are interconnected through an opening through which the band substrate
is guided; and
at least one air-lock valve provided at the opening;
the at least one air-lock valve comprising:
a housing having the opening; and
at least one moveable sealing body cooperating with a sealing surface of the housing for
closing the opening during a closing phase of the air-lock valve, with the band substrate being
clamped between the at least one movable sealing body and the sealing surface;

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wherein the sealing surface surrounds the opening in a frame-like fashion, and the opening is closed by pressing the body upon the sealing surface and/or upon the band substrate traversing the opening such that the body closes the opening at least through indirect abutting at edges of the sealing surface.

32. (new) The processing plant according to claim 31, wherein:
the sealing body of at least one air-lock valve and the sealing surface are turned towards the additional chamber to be occasionally ventilated.
33. (new) The processing plant according to claim 31, wherein:
the body comprises a cylindrical roll.